

CLAIM AMENDMENTS

1. (Currently Amended) A method of representing an object appearing in ~~a still or video image~~ an image or a sequence of images, by processing signals corresponding to the image, the method comprising:

deriving a plurality of ~~numerical~~ peak coordinate values associated with features ~~appearing on the outline of an object of~~ a CSS representation of the object by smoothing an outline of the object in a plurality of stages starting from an arbitrary point on the outline, and ~~applying a predetermined~~

~~ordering to said values to arrive at a representation of the outline~~ the peak co-ordinate values of the CSS representation on the basis of peak height values of the plurality of peak co-ordinates, the peak height values corresponding to a parameter used for smoothing the outline.

2. (Currently Amended) A method as claimed in claim 1, wherein ~~the predetermined~~ said ordering ~~is such that the resulting~~ includes generating a representation of the outline that is independent of ~~[[the]]~~ a starting point on the outline.

3. (Currently Amended) A method as claimed in claim 1, wherein ~~the numerical values reflect points of inflection on the curve~~ said ordering includes ordering the peak height values starting from the

greatest value.

4. (Currently Amended) A method as claimed in claim 3 wherein ~~a curvature scale space representation of the outline is obtained by smoothing the outline in a plurality of stages using a smoothing parameter sigma, resulting in a plurality of outline curves, using values for the maxima and minima of the curvature of each outline curve to derive curves characteristic of the original outline, and selecting the co-ordinates of peaks of said characteristic curves as said numerical values~~ said ordering includes ordering the peak height values in decreasing size.

5. (Currently Amended) A method as claimed in ~~claim 4~~ wherein ~~the co-ordinates of the characteristic curves correspond to an arc-length parameter of the outline and the smoothing parameter~~ claim 1, wherein said ordering includes ordering the peak height values starting from the smallest value.

6. (Currently Amended) A method as claimed in ~~claim 5~~ wherein ~~the peak co-ordinate values are ordered on the basis of the peak height values, corresponding to the smoothing parameter~~ claim 1, further comprising:

producing a descriptor from said ordering of the peak height values, and

storing the descriptor.

7. (Currently Amended) A method as claimed in ~~any one of claims 1 to 6 wherein the values are ordered starting from the greatest value~~ claim 6, wherein said storing includes storing the descriptor in a database.

8. (Currently Amended) ~~A method as claimed in claim 7 wherein the values are ordered in decreasing size~~ An apparatus adapted to implement a method as claimed in claim 1.

9. (Currently Amended) ~~A method as claimed in any one of claims 1 to 6 wherein the values are ordered starting from the smallest value~~ A computer program for implementing a method as claimed in claim 1.

10. (Currently Amended) ~~A method of representing an object appearing in a still or video image, by processing signals corresponding to the image, the method comprising deriving a plurality of numerical values associated with features appearing on the outline of an object to represent said outline and deriving a factor indicating the reliability of said representation using a relationship between at least two of said values~~ A computer system programmed to operate according to a method as claimed in claim 1.

11. ~~A method as claimed in claim 10 wherein the factor is based on the ratio between two of said values~~ A computer-readable

storage medium storing computer-executable procedures for
implementing a method as claimed in claim 1.

Claims 12-24 (Canceled).

25. (New) A method for representing an object appearing in an image, comprising:

identifying at least one object outline;

determining a curvature scale space representation for said outline, by smoothing the outline in a plurality of stages, to generate peak coordinates for the curvature scale space representation; and

ordering said peak coordinates based on peak height value, corresponding to a parameter used for smoothing the outline, to generate a shape descriptor for said outline.

26. (New) The method of claim 25, further comprising:

storing said shape descriptor as a description for said object in a memory.

27. (New) A method for representing an object appearing in an image, comprising:

identifying at least one object outline;

determining a curvature scale space representation for said outline, by smoothing the outline in a plurality of stages, to

generate peak coordinates for the curvature scale space representation; and

ordering said peak coordinates, by selecting highest peak value and associated highest peak coordinates and ordering remaining peak coordinates in decreasing peak height, to generate a shape descriptor for said outline wherein said highest peak value and other peak values corresponding to a parameter used for smoothing the outline.

28. (New) The method of claim 27, further comprising:
storing said shape descriptor as a description for said object in a memory.

29. (New) A method for representing an object appearing in an image, comprising:

identifying at least one object outline;
determining a curvature scale space representation for said outline, by smoothing the outline in a plurality of stages, to generate peak coordinates for the curvature scale space representation; and

ordering said peak coordinates, by selecting highest peak value and associated peak coordinates and ordering remaining peak coordinates in relation to x-coordinate values by shifting x-coordinates of the remaining peak coordinates in relation to x-coordinate associated with said highest peak value, to generate a

shape descriptor for said outline wherein said highest peak value and other peak values corresponding to a parameter used for smoothing the outline.

30. (New) The method of claim 29, further comprising:
storing said shape descriptor as a description for said object in a memory.

31. (New) A method for representing an object appearing in an image, comprising:

identifying at least one object outline;
determining a curvature scale space representation, by
smoothing the outline in a plurality of stages, for said outline to generate a plurality of curves representative of said outline;
determining peaks and associated peak coordinates for said plurality of curves; and

ordering said peak coordinates, by selecting highest peak value and associated peak coordinates and shifting the x-coordinate associated with said highest peak value to a value of zero, and ordering remaining peak coordinates in relation to x-coordinate values by shifting x-coordinates of the remaining peak coordinates in relation to said shifted x-coordinate associated with said highest peak value, to generate a shape descriptor for said outline wherein said highest peak value and other peak values corresponding to a parameter used for smoothing the

outline.

32. (New) A method for representing an object appearing in an image, comprising:

identifying at least one object outline;

determining a curvature scale space representation, by smoothing the outline in a plurality of stages, for said outline to generate peak coordinates for the outline curvature scale space representation, wherein said peak coordinates are determined using a plural stage filter that produces derivative curves representative of said outline by convolving said object outline; and

ordering said peak coordinates, by selecting highest peak value and associated highest peak coordinates and ordering remaining peak coordinates in decreasing peak height, to generate a shape descriptor for said outline wherein said highest peak value and other peak values corresponding to a parameter used for smoothing the outline.